

REMARKS

Claims 1, 3, 5, 7-11, 13-15 and 17-21 are pending in this application. Claims 1, 11 and 21 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicants regard as their invention.

Claim Rejections under 35 USC §103

Claims 1, 4, 5-7, 11, 14-17 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2500761 in view of JP 60-16200.

The present invention is a speech recognition device. There are a total of four embodiments described in the specification for this speech recognition device. In this speech recognition device is included as shown in Figure 1 a microphone connected to an A/D converter (2). The A/D converter (2) is connected to both a signal delay unit (3) and a sound level estimator (4). The sound level estimator (4) calculates a sound level estimation value based on the applied digital sound signal. The signal delay unit (3) applies the digital sound signal delayed by a predetermined sound level rising time period to a sound level adjuster (5). The sound level adjuster (5) adjusts the sound level of the digital sound signal based on the sound level estimation value. The adjusted sound level output is sent to the speech recognition unit (6) where speech recognition is performed.

JP 2500761 describes a speech recognition device in which amplification is set to a constant level so that gain of the amplification means is rendered large for small voices and rendered small

for large voices. As described in paragraphs 7 and 17 the result of voice recognition does not vary with distance or volume of the voice and voice recognition is greatly improved.

JP 60-16200 describes a voice recognition system in which a delay circuit (13) delays a voice input signal.

Applicants have amended independent claims 1, 11 and 21 to overcome the prior art.

JP 6016200 describes on page 6 that “the sound input to the variable gain amplifier in synchronization with the output timing of the gain control signal.” However, JP 6016200 fails to disclose or suggest that the digital sound signal in the sound period is alternately stored in the first and second buffers and the stored digital sound signal in the sound period is alternately output to the sound level adjuster as claim 7 of the present application.

The effects brought out from the above configuration are described on page 8, line 24 to page 9, line 8 of the present applications specification.

For the above reasons, Applicants do not believe that the present invention as claimed in claims 1, 11 and 21, as amended in the above described manner, would have been anticipated by or obvious over the cited references.

Therefore, withdrawal of the rejection of claims 1, 4, 5-7, 11, 14-17 and 21 under 35 U.S.C. §103(a) as being unpatentable over JP 2500761 in view of JP 60-16200 is respectfully requested.

Claims 3, 10, 13 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2500761 in view of JP 60-16200 and further in view of JP 126093 (Okamoto).

JP 126093 (Okamoto) describes a voice adjusting method in which a level decision part (42) decides whether the measured sound level resides within a prescribed range and outputs an input gain control signal to control the input voice so that it lies within the prescribed range.

Claims 3, 10, 13 and 20 are allowable by virtue of their dependence upon allowable independent claims. Therefore, withdrawal of the rejection of claims 3, 10, 13 and 20 under 35 U.S.C. §103(a) as being unpatentable over JP 2500761 in view of JP 60-16200 and further in view of JP 126093 (Okamoto) is respectfully requested.

Claims 8-9 and 18-19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2500761 in view of JP 60-16200, and further in view of JP 2975808 (Koichi).

JP2975808 (Koichi) describes a voice recognition device in which when voice recognition fails circuit (2C) is switched to increase the gain on the variable gain amplifier (2B).

Claims 8-9 and 18-19 are allowable by virtue of their dependence upon allowable independent claims. Therefore, withdrawal of the rejection of claims 8-9 and 18-19 under 35 U.S.C. §103(a) as being unpatentable over JP 2500761 in view of JP 60-16200, and further in view of JP 2975808 (Koichi) is respectfully requested.

Conclusion

In view of the aforementioned amendments and accompanying remarks, claims 1, 11 and 21, as amended, and the remaining independent claims, are believed to be patentable and in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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